

Every child is a National Asset

Language and STEM education at school - policy and research

03 October 2017



basic education
Department:
Basic Education
REPUBLIC OF SOUTH AFRICA



Read to Lead
A Reading Nation is a Leading Nation

OUTLINE

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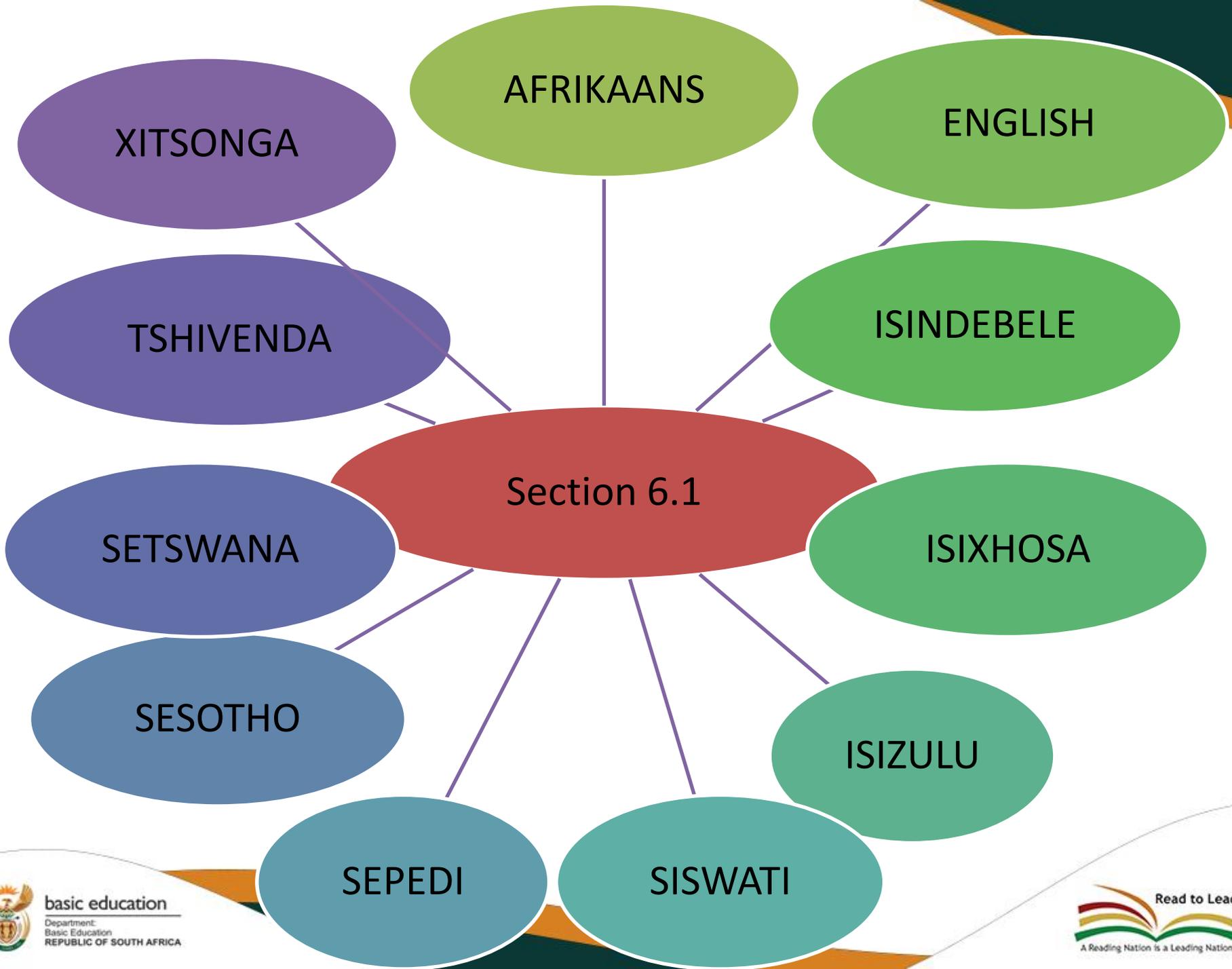
LEGISLATIVE FRAMEWORK

The promotion and protection of linguistic rights - rooted in the following legislative framework:

- a) The South African Constitution, 1996, Section 6 (the founding provisions) and Section 29 (the Bill of Rights)
- b) The National Education Policy Act, Section 3(4)(m), 1996 - Language in Education Policy, and
- c) The South African School Act, Section 6(1), 1996 - The Norms and Standards regarding language policy

The Constitution

- Section 6 of the South African Constitution - Languages as one of the six founding provisions of the constitutions
- **Section 6.1:** The official languages – *next slide*
- **Bill of rights**
- **Education:** Section 29(2): everyone has the right to receive education in the official language or languages of their choice in public educational institutions where that education is **reasonably practicable**



NEPA, SASA & LiEP

- The National Education Policy Act of 1996: Clause 4 (v) provides for the right of every student to be instructed in the language of his or her choice **where this is reasonably practicable**
- **SASA:** Section 6.2: The governing body of a public school may determine the language policy of the school
- The **LiEP, 1997:** Promotes multilingualism, equitable development of the official South African languages, and fostering respect for all languages used in the country, including South African Sign Language.

NCS Grade R - 12

- The National Curriculum Statement (NCS) Grade R-12: provision for equal use of all 11 official languages in the schooling system
- Language Standardisation Policy (2001):
 - Rationale: establish uniformity in the teaching and assessment of all eleven official languages.
 - Promote equity, redress, efficiency and quality in the teaching and

Language issues

- NDP recommendation: Learners' home language as LoLT for longer and English be introduced much earlier in the foundation phase.
- The NCS Grades 1-12: Learners to learn through their home language(s), particularly, though not limited, in the Foundation Phase.
- The NDP
 - proposes as **policy** that every South African should study one of the nine official black languages at school
 - acknowledges the role of English as a global language
 - the general language of learning, commerce and administration

Language issues

- Unintended consequence? English still preferred as a LoLT
- Afrikaans the only other LoLT
- The two languages not HL to the majority of learners
- Studies within and external to DBE: LoLT is a Barrier to learning

Possible causes

- proficiency on the part of both learners and educators inadequate.
- Language is a barrier to teaching and learning for most of the learners who use English, which is not their home language, as the LoLT.
- Lack of proficiency in both interpersonal and cognitive academic skills negatively affects performance in learning outcomes.
- Most learners are struggling with the demands of the higher order language skills, i.e. reading / viewing and writing required by assessment tasks.



Possible causes cont..

- Most learners are not coping with comprehension, using appropriate vocabulary and applying the correct language structures and conventions when writing examination papers.
- Learners writing the examination in a language other than their home language tend to experience difficulty in interpreting questions and phrasing their responses.
- Some of the teachers offering languages do not have sufficient content knowledge and pedagogical skills to prepare learners sufficiently for assessment.
- **Most of the teachers are not proficient** in using the LoLT to enhance language acquisition.
- ***Political stance?***



Language and STEM subjects

- Diagnostic report – Mathematics
 - Candidates struggled with concepts in the curriculum that required deeper **conceptual understanding**.
 - Questions where candidates had **to interpret information or provide justification, presented the greatest challenge**.
 - **The language in this question could have been a barrier to the candidates.**
 - **‘It is evident that language is still a major challenge as some candidates used inappropriate words in their reason.’** Diagnostic report

Language and STEM subjects

- Diagnostic report – Recommendations
 - Learners should do many examples in context in order to deepen their understanding of the different problems as well as the **language associated with financial questions.**
 - Teachers should use **the correct language in class and in assessment tasks.**
 - Teachers should use the correct notation and **mathematical language** on a daily basis in the classroom.
 - Encourage learners to speak the mathematical language in the classroom.
 - **Teachers also need to realise that learner's understanding of the concepts is more important than them merely doing routine procedures in the section.**

DBE response: English Across the Curriculum (EAC)

- An intervention strategy developed to assist learners who face barriers to learning as they offer content subjects through the medium of a language that is not their own.
- Strategy aimed at improving the teaching of English as a subject as well as English as LoLT
- Based on the premise that every teacher is a language teacher
- Basic language skills such as listening and speaking, reading and viewing, writing and presenting should also be taught in content subjects.

EAC cont...

- Strategy developed in 2012-13
- Manual for Teaching: 2014
- Currently –
 - Digital scripted lessons
 - Booklets

English Across the Curriculum

- Success hereof :
 - learners able to fully participate in society and the economy through equitable and meaningful access to education
 - support their general conceptual growth and to
 - counter disadvantages resulting from different kinds of mismatches between home languages and languages of learning and teaching
 - employ language skills to decode concepts, thus leading to enhanced grasp of content subjects

Success...

- differentiate subject-speak from general language use
- effective use of language skills – e.g. word-attack skills [prefix, suffix] to enhance content acquisition
- support their general conceptual growth and to
- counter disadvantages resulting from different kinds of mismatches between home languages and languages of learning and teaching
- employ language skills to decode concepts, thus enhanced grasp of content subjects

Conclusion

- Every subject – language and science component
- Language a vehicle to decode the science
 - a vehicle through which knowledge can be acquired
- Language is central to teaching and learning
- It enables expression of concept formed, then application thereof
- *Ergo*, Language proficiency = proficient content acquisition

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Thank you!

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callcentre@dbe.gov.za

callcentre: 0800 202 933